

*Washington Park Arboretum*

# BULLETIN



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## Washington Park Arboretum

The Arboretum is a 230-acre dynamic collection of trees, displaying internationally renowned collections of oaks, conifers, camellias, Japanese maples, hollies and a profusion of woody plants from the Pacific Northwest and around the world. Aesthetic enjoyment gracefully co-exists with science in this spectacular urban green space on the shores of Lake Washington. Visitors come to learn, explore, relax or reflect in Seattle's largest public garden.

The Washington Park Arboretum is managed cooperatively by the University of Washington and Seattle Parks and Recreation; the Arboretum Foundation is its major support organization.

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The Arboretum Foundation is a nonprofit organization established in 1935 to ensure stewardship for the Washington Park Arboretum and to provide horticultural leadership for the region. The Foundation provides funding, volunteer services, membership programs and public information in support of the Arboretum, its plant collections and programs. Volunteers operate the gift shop, conduct major fund-raising events, and further their gardening knowledge through study groups and hands-on work in the greenhouse or on the grounds.

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**ABOVE:** Although the summer-blooming *Magnolia grandiflora*, America's native Southern magnolia, can grow to be 90 feet tall, the cultivar *M. grandiflora* 'Goliath,' pictured here, is known for its shorter, bushier growth as well as flowers which can reach 10 inches in width. It is hardy in Zones 7-9. This magnolia can be seen at Arboretum grid locations 26-3E and 35-2E.

**ON THE COVER:** Hardy to Zone 5, *Magnolia hypoleuca*, Japanese whitebark or silverleaf magnolia, grows only to 50 feet. Chosen for its 18-inch leaves and huge, Creamsickle, early summer blooms, *M. hypoleuca* is comfortable in both sun and partial shade. In the Arboretum, it can be found at grid locations 22-2E, 24-4E, 28-2E and 29-2W.

# How I Became A Gardener

Potential Arboretum Foundation Board members are almost always asked one important question before coming on the board: Are you a gardener? Most candidates are, while others say they provide significant support to their family “head” gardener. (A few apologetically explain that although they are not gardeners, they do love the Arboretum.)

The question that often follows—How did you become a gardener?—is the same question answered by several of the Bulletin’s editorial board members on page eight of this issue.

Like many others, my initial “gardening” experiences came at an early age. My parents bought their first house in a small town, miles away from anywhere. A large vegetable garden and a cutting garden grew in the back yard. Although I recall cutting some flowers, picking corn and perhaps scratching around a bit, I probably wasn’t much help in the garden. During that time (I hesitate to use the word “era”), kids spent most of their time outside

when not in school. So while not actually gardening, I was either in the woods, in a field or by the large pond nearby (probably a mile or so away). Those sights and smells and sounds have remained with me to this day.

My love of earthy endeavors probably extends back even another generation. My grandparents were farmers, and my maternal grandmother was a great farm cook. I fondly remember hot summer days outdoors, hiding between corn rows, riding out to the field to dig potatoes and picking lettuce for supper. Huge flowering trees and shrubs by the house burst with fragrant and bountiful flowers. Nothing exotic was on the plant list—just lilacs, snowball bushes, apple and plum trees. My mother taught me how to dig potatoes; my dad, how to saddle a horse; and my grandmother, how to churn butter. Table scraps weren’t sent to the compost but were thrown to the hogs. Respect for plants, animals and the environment became a part of me.

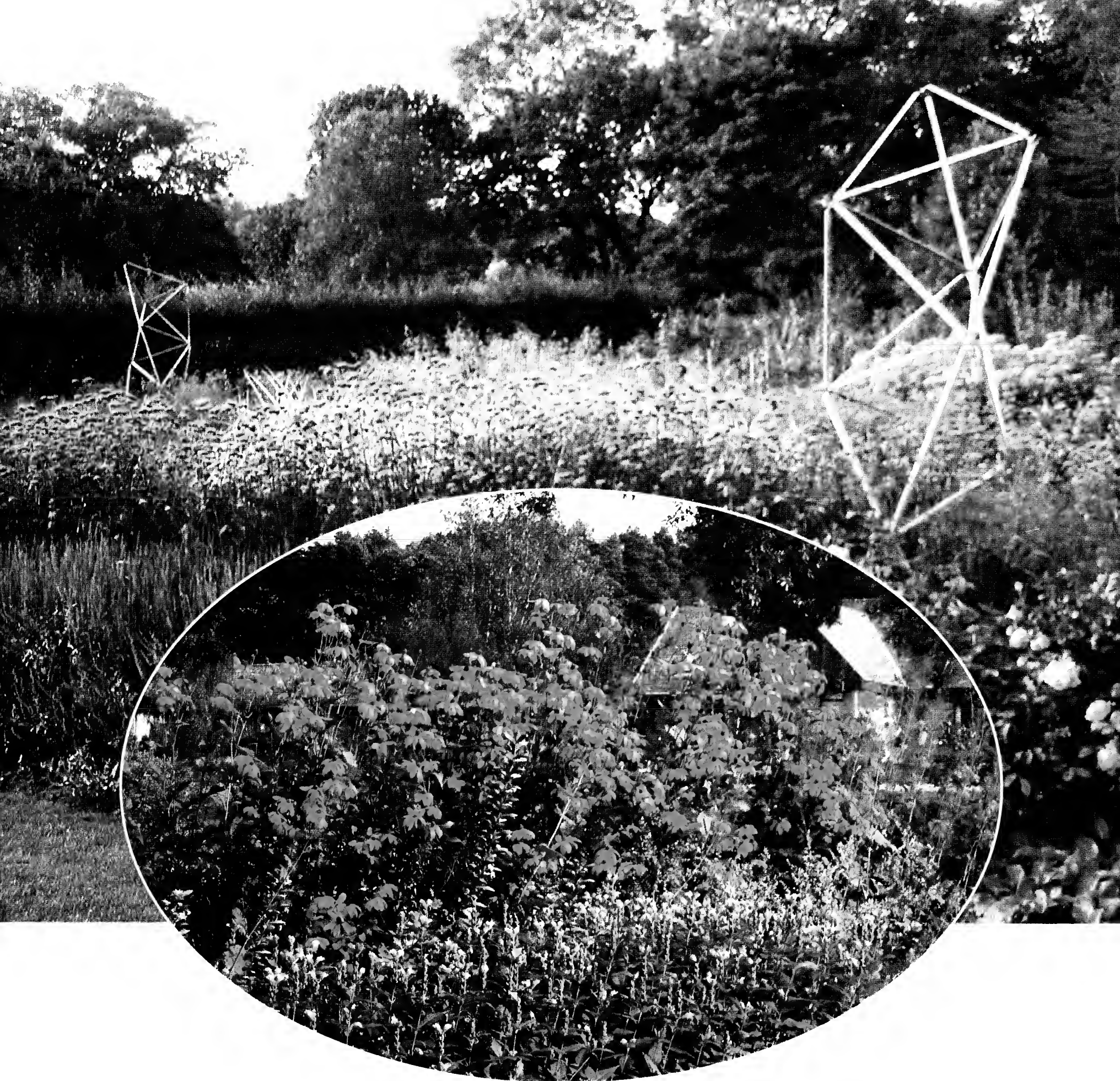
As I look at my gardening life today, I can see the roots of my upbringing. On our retirement property of six, mostly wooded, acres, I delight in looking for trails and finding patches of trillium, vanilla leaf and wild roses. And even though we do not yet live there full time, together, with our neighbors, we have created huge rows of red raspberries and eight raised beds for vegetables, cutting flowers and herbs. I still want and need trees and plants and the outdoors around me. Perhaps that is why volunteering—and then working—for the Arboretum Foundation came so naturally. I love the Arboretum and all that it gives to our community. ~



The central, dark blue, fertile florets of *Hydrangea macrophylla* ‘Lilacina’ are surrounded by violet blue, sterile flowers. Hardy to Zone 5, this old, garden-worthy selection blooms on both old and new wood and may be found at Arboretum grid coordinates 11-6E.

Deborah Andrews, Executive Director,  
Arboretum Foundation





# RHS Harlow Carr

TEXT AND PHOTOS BY CATHERINE ALLAN

Garden memories wash over me as I step into my chic Land's End boots for another soggy, spring gardening day in Seattle. As I tighten the bootlaces, I am reminded of my recent Royal Horticultural Society (RHS) Garden internship at Harlow

Carr. How can I draw from that unique experience to feel inspired enough to face my own garden jungle? The fading memory of a warm Indian summer in West Yorkshire quickly melts into the sunset when I survey the muddy mess of my garden left by Northwest winter rains!

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**BACKGROUND:** The main flower border at RHS Harlow Carr, with sculptures that support young climbing roses, features perennials such as *Verbena* species, North American native Joe Pye weed (*Eupatorium purpureum*) and yellow black-eyed Susans (*Rudbeckia* species), native to eastern North America (**INSET**).

The RHS Garden at Harlow Carr was a half-hour bicycle ride for me through the pristine Valley Gardens and Pine Woods west of the quiet town of Harrogate, England. Riding my innkeeper's bicycle through these charming public gardens each morning became routine during my two-week internship.

## How Did This Opportunity Evolve?

How did I get to do an internship at Harlow Carr? Largely due to the generosity of Monte and Diane Powell—serious gardeners who spent the summer “working” at Harlow Carr in 1992—the foundation at South Seattle Community College established an internship at Harlow Carr in the early 1990s. (More about the Powells' garden may be found at [www.powellswood.org](http://www.powellswood.org).) As a result, each year, two students are awarded the opportunity to observe and learn English gardening practices at the garden. Lisa King and I were the lucky recipients in 2005. No other institution or organization has such an arrangement with Harlow Carr, so we felt very privileged. Independently, both of us chose to schedule our visits during the latter part of September—just the first of my serendipitous English adventures last fall.

## An Extraordinary Gift

The first day I arrived at Harlow Carr, I was asked to job-shadow Amy in the Herb (the “h” is pronounced) Garden. Amy asked if I would mind cutting back some lavender stalks (heavenly!). I was on my hands and knees when a visitor struck up a seemingly impromptu conversation.

“The obviously large seed head sticking out of my handbag wasn't stolen,” she asserted. Noticing from my reply that I wasn't English, she asked where I was from and what I was doing at Harlow Carr. After I explained my intern status, she breathed a sigh of relief—realizing that I had come to

observe, not to condemn. Then she asked if I had read any of Beth Chatto's books on garden design and landscapes. No, I hadn't. In fact, I hadn't even heard of Beth Chatto. Soon this thoughtful woman quietly disappeared and returned shortly, offering me Beth Chatto's “Garden Notebook”! I was so flabbergasted by this spontaneous gift that I neglected to ask her to write her name in it. What a gift—and after only three hours on the “job”!

## And a Chance Meeting

The second morning, I awoke to a steady, English downpour and, still suffering from jetlag, asked myself how was I going to get through the day. I had brought long underwear and knitted gloves that served me well on my early morning bike rides through the Pine Woods. But, for the moment, I had only lightweight rain gear and no umbrella. I wasn't too cheerful as I made my way through the breakfast buffet.

Although I thought I had started the toaster when I pushed the handle down, the gentleman behind me in line kindly showed me that I also needed to turn the toaster's dial. Feeling foolish, I sheepishly retreated to my table where my coffee and newspaper were waiting. Shortly afterwards, the kind gentleman waved, signaling that the toast was ready. Thanking him, I retrieved it and quietly returned to my table.

The day began to improve when the inn's concierge offered me an umbrella upon my departure for the garden. Then the garden staff offered me a heavy Gore-Tex® jacket for the day, so I was set. During the traditional morning tea break, someone asked if I would like to establish an RHS Internet account. Sadly, my queries were answered somewhat gruffly with “come back tomorrow.” Disappointed, I made my way through the lobby, snapping the last clasps on the heavy jacket, when a gentleman passed me in a

hurry. Retracing his steps, he stopped and asked if I was the lady from breakfast. My look undoubtedly conveyed my confusion, for I did not recognize him.

Graciously, he introduced himself: "Hello, my name is David Gray, the President of the Royal Horticultural Society." Rather astounded, I did manage to gather the wherewithal to express my appreciation for his introduction. He was very kind and asked me where I came from. "Seattle," I replied. He immediately mentioned how much he loved our Skagit Valley and the Puyallup tulip fields. In fact, he added, "Please don't tell anyone at the RHS, but I am thinking of retiring in the Snake River Canyon area."

The ladies at the reception desk overheard our conversation and said, "You've been here only two days, and you have just met the RHS president, *Sir* David Gray!"

Serendipity was certainly once again present, in spite of the downpour. Luckily, that was the only soggy day of my trip, until the afternoon of the very last day, when it was time to bike into town. No complaints!

## The Garden Itself

The plant collection at Harlow Carr includes many natives, exotics, and evergreen and deciduous hedges, as well as a glasshouse where alpine plants are displayed. But their claim to fame is the mind-boggling mixed border, packed with herbaceous perennials. There are no low-maintenance garden beds in sight. The growing climate is comparable to that of the Puget Sound region. In fact, their soil is heavily compacted, despite their best efforts to amend and mulch.

Immediately, I was impressed with the open lines of communication at the garden. Each Monday morning, the Harlow Carr curator/director, Matthew Wilson, distributed an outline of the week's goals and discussed them with the garden staff. Since the staff was working on a Winter Walk, to be completed

by this past spring, Wilson held the discussion in the Winter Walk area of the garden, describing the future design of its entrance. Consequently, the garden staff was encouraged to ask questions and respond to the changes that the RHS Board of Directors had approved.

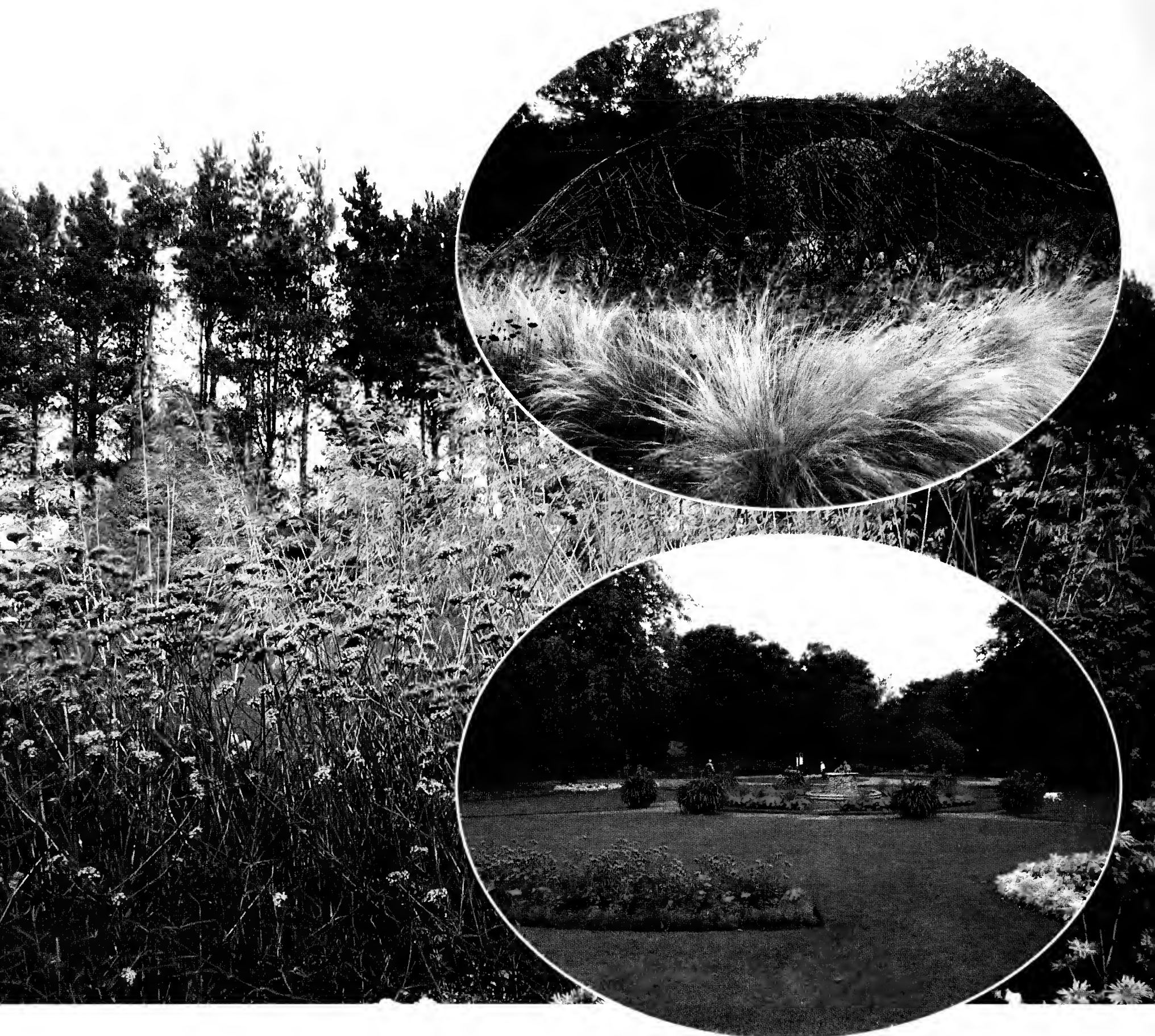
The scale of the garden at Harlow Carr—only 62 acres—is much smaller than Seattle's Washington Park Arboretum, but it has five times the number of gardeners—a small army of 15 to 20 people who maintain the garden immaculately. In America, we spend public funds to build state-of-the-art sports arenas; imagine spending equal public funds on gardens and parks, as they do in England. Wouldn't this be the Garden of Eden? In America, we interpret the word "public," when applied to gardens and parks, to mean that they offer "free" access. This is not so in Great Britain. In order to pay for their gardens, visitors become RHS members or pay a hefty fee. As a result, these beautiful gardens remain intact, with little damage or thievery, and the general public highly respects its garden heritage.

Although I appreciate the differences between American and English gardens with respect to fastidiousness and funding, the best part of my experience at Harlow Carr was interacting with the people who work there. The size of the staff enabled me to rotate among the various areas in the garden, observing gardening techniques and learning from the experts. Gardeners, in general, are not highly esteemed in either culture; however, English gardeners are educated and often specialize, becoming highly respected for their horticultural expertise. It was extremely stimulating to be surrounded by such knowledgeable people.

## The National Trust

While in England, one of my goals was to understand the difference between the RHS





gardens and the National Trust gardens. An RHS garden emphasizes experimentation, teaching and learning, and includes test plots and trial beds. National Trust gardens are historical properties, having been designed, perhaps, by famous landscape designers or architects, such as Capability Brown. For

example, Fountains Abbey, a National Trust garden located north of Harrogate, was established on the ruins of a 13th century abbey.

A second, obvious distinction between the RHS and the National Trust is funding. The four RHS gardens, at Wisley, Hyde Hall, Rosemoor and Harlow Carr, are privately

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**BACKGROUND:** This autumn border at Harlow Carr features asters, grasses and dramatic stands of *Verbena bonariensis*.

**INSET TOP:** These woven willow stems were sculpted as a backdrop for grasses and chocolate cosmos (*Cosmos atrosanguineus*).

**INSET BOTTOM:** The Valley Gardens of Harrogate, through which the author bicycled to Harlow Carr.



funded with memberships and donations. The National Trust, a public charity, raises funds to keep these vast properties well maintained. Some National Trust gardens were, originally, privately owned, but the RHS gardens remain independent and have always been cutting-edge testing grounds administered by horticulturists.

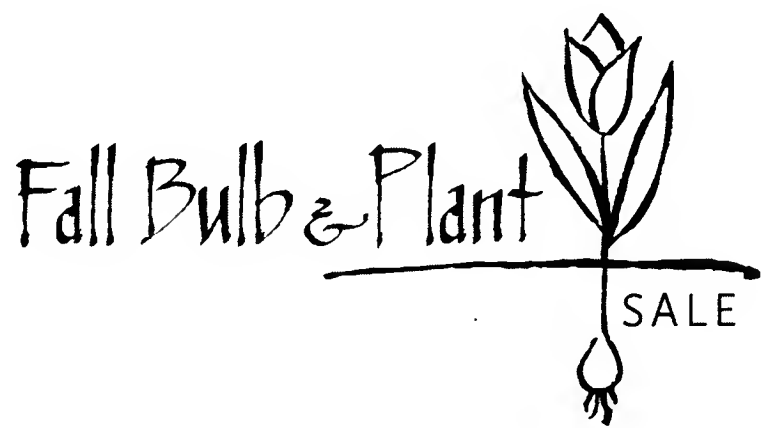
### **Bringing Serendipity Home**

The last serendipitous event of my visit happened thanks to a former RHS Wisley garden horticulturist and designer, Dean Peckett, now a supervisor at Harlow Carr. He put me in touch with the current director of horticulture at RHS Wisley, David Jewell, who generously shared two precious hours one Friday morning giving me a special tour of “his” 40 acres of mixed borders. Wisley includes over 200 acres of specialty gardens, orchards, pinewoods and test plots. It is the flagship of the four RHS gardens and is located an hour south and east of London in Surrey. Wisley is the longest-established RHS garden in the group, with five times as many gardeners as Harlow Carr. In comparison, Harlow Carr is a progressive garden with newly designed garden beds and test gardens.

Back in Seattle, preparing to face the muddy mess before me, while tightening the laces on my “chic,” but well-worn garden boots, I am reminded of these remarkable RHS gardens, and especially of the neat and tidy garden at Harlow Carr. Surely these memories will continue to inspire me as they did during my internship. I need lots of inspiration! ~

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**CATHERINE ALLAN** is a residential landscape designer and horticulturist who volunteers in the curation office at the Arboretum. She is planning European garden tours for later this summer and can be reached at [gardensroyal@yahoo.com](mailto:gardensroyal@yahoo.com) for further details.



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# On Becoming a Gardener

OCCASIONAL REFLECTIONS: # 1

## *First Garden*

*"As a permanent influence on us all, aren't our first gardens so much more memorable than gardens created in later years? . . . In Garden City, tremendous tall trees to climb, yards of small, clipped boxwood hedges to jump, taller hedges to hide behind, and a cutting garden with scented flowers, mostly lilacs, to remember—these were the elements saved. An acre of lawn for someone else to mow was, I realize now, the best part."*

—JOAN HOCKADAY

*"My grandmother's property went almost down to the banks of the Mississippi River in Bettendorf, Iowa, up river from Davenport. It was all perennials, full of summer bloom, and old, woody things including a pear tree, so huge three children could play inside of it."*

—JAN PIRZIO-BIROLI

*"When I was still a toddler, my dad used to give me the tops of carrots from the kitchen to put in a pan of water on the windowsill in my bedroom. I was entranced when the carrot tops began to grow. This invited me to try seeds—oranges and avocados—and when the first began to germinate, I was hooked for life. There is still nothing so magical, to me, as a germinating seed. But the bottom line is that I was brought to horticulture through kitchen refuse. Give the kid a few potato peels, and he will entertain himself for hours."*

—DAN HINKLEY

*"Two floral displays made vivid impressions upon my early childhood. The first was my grandparents' garden in White Rock, British Columbia, where, every year, they covered a large slope with trailing nasturtiums (*Tropaeolum majus*). The sheet of summer sunset colors intrigued me and the humming-birds alike. In the fall, I helped my grandfather gather and clean seed for the next year's planting."*

*"Back home, just outside my bedroom window, was a clump of huge, velvety, blood-red gladioli—a*

*dozen or so spikes with double rows of six-inch florets every July and striking seedpods lasting well into fall. My parents, noting my interest, surprised me with a dozen gladiolus corms for my 7<sup>th</sup> or 8<sup>th</sup> birthday. These, along with nasturtiums grown from my grandparents' seed, formed my first garden."*

—BRIAN THOMPSON

*"My path began in grade school when, every year, we got to buy seeds that would arrive in time for spring planting in our little cottage cheese box garden containers. Up would come tiny pre-marigolds or peas, and we would revel as we watched them grow—heady stuff for a kid living in an apartment in Brooklyn."*

*"This gave way to dollhouse gardening. My beautiful dollhouse sat on the radiator in my bedroom and cried out for something green. I sent away for grass seed from a comic book advertisement and, pretty darn quick, had a little lawn that lasted until October 15—the day landlords were legally obligated to turn on the heat."*

—HOLLY REDELL

*"World War II was not a propitious time to begin gardening. But my awakening creativity and aesthetic sensibilities were rewarded by planting a succession of marrow [zucchini squash] crops, as a grace note, atop the soil mound over our Anderson air-raid shelter. At the end of the war, this short-lived gardening career took a terrible nose-dive when my parents took over from our old gardener, and I was reduced to the status of yard boy—which continues. I mowed the lawn, with its large, shallow depression—the symbolic grave of my first garden."*

—DAVID STREATFIELD

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All of these reflections come from members of the Bulletin's editorial board.



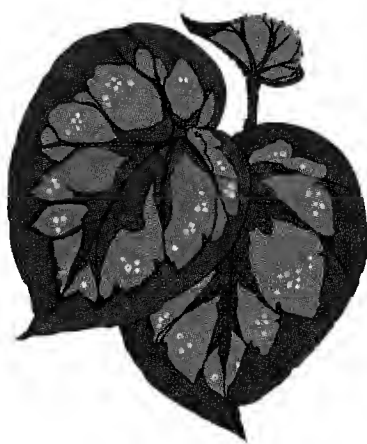


PHOTO BY JOHN NEFF

# Dinosaur Salad

BY STEVE LORTON

There are times when it's good to think like a dinosaur, a brontosaurus, to be exact—one of those docile-looking plant eaters that roamed America in the Jurassic Period. They had long necks



and tails and sweet, cartoon-like faces that would make you want to keep one in a terrarium—if you had one big enough. A brontosaurus could reach over 75 feet in length and weigh over 30 tons.

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The “meat-platter” size leaves of the yellow-green *Hosta* ‘Sum and Substance’ add significance to a group of smaller-leaved shrubs and perennials that might otherwise seem too fussy.

I began thinking like a dinosaur on a perfect summer day in the mid 1980s. My wife Anna Lou and son John (age five at the time) and I were in Victoria, British Columbia. They had spent yet another day trudging around gardens with me, God bless 'em. We had just visited a lavish, move-over-*Gertrude Jekyll* perennial border, and I was still reverberating from something I had heard the creator say.

The lady, a British transplant, pointed to a plant that had been cut to the ground and in a shrill voice said, "I often let them bloom, do their thing, then cut them right back and let something else do its thing." I shivered. There was Elizabeth I, block and ax in her voice, and the notion of "beheading" a happy plant seemed blasphemous to me—something akin to infanticide. True, some perennials benefit from this brutal practice: species geraniums and *Alchemilla mollis* are good examples, but I wondered: What is she missing in this rush to go on to the next . . . the next what? Flower!

By this time our little family had moved on to Beacon Hill Park. I was sputtering about perennials, about how gardeners too often think in terms of flowers and don't pay enough attention to foliage—its form, color and texture, and what the plant does through all three seasons of its active life.

And there we were in front of an enormous clump of *Gunnera manicata*. Anna Lou said, "What's that?" And I snarled, "That is exactly what I'm talking about. Look at that, it's a perennial!" And John quietly said, "Dinosaur salad."

Out of the mouths of babes . . .

Since that moment of epiphany, I've never been able to look at a big perennial without



**. . . the notion of  
"beheading" a  
happy plant seemed  
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something akin to  
infanticide.**

thinking, "Would a dinosaur want to munch on that?" And that question has led me to some interesting additions to my garden and an appreciation of plants I might never have dreamed of.

## Choosing Salad Greens

Is the banquet of your garden a little lackluster? Serve a dinosaur salad. Need one good thing to fill an empty spot? Dinosaur salad. These are traffic-stopping perennials. Maurice Horn, co-owner of Joy Creek Nursery in Oregon puts it this way: "Large leaves are showy, and

they help showcase other plants. I use them because most gardens are so busy that it's hard to see anything, especially in spring. Large leaves anchor a planting, give the eye a rest and ultimately allow you to see more."

*Gunnera*, *acanthus* and *cannas* are, of course, obviously dinosaur-salad plants. With all three, the blooms are secondary, if not beside the point. I grew *Gunnera manicata* (until a tough winter did it in) at the edge of a pond up in the Skagit Valley. The thick, crinkly, prickly, behemoth leaves stretched out over the pond's edge atop three-foot stems. In that rich, soggy soil, some of the leaves grew to be four feet across—not the maximum for *gunnera*, but enough to thrill all my visitors and me. And best of all, on sunny days, the tiny, bright emerald-green tree frogs hopped up on the leaves and stretched out between the thorns to sun themselves, safe from predators. I've never seen other jewels that come close to that spectacle.

Glossy leafed *Acanthus mollis* is, of course, another of the great dinosaur munchies that can hold its own anywhere. If its leaves droop in summer, water it. They'll pop back up. If



they brown, cut them back; new growth will quickly sprout. The deep green leaves, said to be the inspiration for the capitals of Corinthian columns, can be two feet long. The bloom spikes can top four feet. *Acanthus* stays up, green and glistening, in all but the coldest of winters. And if you want another plant someplace else, dig a chunk of root and stick it in the ground. You'll have it, no problem, although ease of propagation also makes *acanthus* as hard to remove as calla lilies. All in all, this plant is a well-known wonder; it is not surprising that it made its way into English gardens as early as 1548.



But there are other, less well-known plants that are equally interesting:

The new growth buds of *Inula magnifica* rumple the ground as they pop up in late March. By late spring, strong straight stems, six feet or taller, support broad, rough, tobacco-like leaves of bright green. Flowers bloom in upright, daisy clusters in vivid egg yolk-yellow. This is a good plant to grow against dark green hedges, next to golden conifers, or paired with finely textured, coppery or purple foliage, such as bronze fennel or *Rosa rubrifolia*. And *I. magnifica* is stunning, rising up from a sweep of ornamental grasses.

A personal favorite among dinosaur salad plants is *Lobelia tupa*. Like *Inula*, it takes the stage in spring like a great basso profundo headed into an aria. Groundbreaking buds are robust and almost ox blood red. Leaves are

silvery (most books say green) and woolly, and slugs seem uninterested in them. Plants shoot up to three feet; then the flower spikes emerge and grow to six feet (mine often hit seven). This is a lobelia? The tubular flowers fill the spike and are often referred to as reddish-brown (mine are vivid red); and they mature into interesting seedpods. This plant is so beautiful that I am certain any brontosaurus would eye it with delight, stretch his long neck down to the base of the plant, snip the bloom off and go romping gleefully toward his sweetheart, the bloom

stem between his teeth. Both *Inula magnifica* and *Lobelia tupa* grow in full sun; neither requires any summer water.

## Red Footprints & Chartreuse Platters

The legendary Ken Gambrill, who for many years was the curator of the Rhododendron Species Botanical Garden, introduced me to *Rheum palmatum*, long before it was an "in" plant. No longer with us, Ken had an eye like no other, and his spirit still guides many a Northwest gardener. Ken grew *Rheum palmatum* 'Atrosanguineum' in a row along one sunny edge of a patio.

As the big buds push through the soil and unfold, they are a brilliant magma-red. Flower stalks push up six feet. The large, deeply cut, mature leaves are dark red to purple and stand up, in a clump, on two-and-a-half-foot stems. I planted one in my Seattle garden and loved

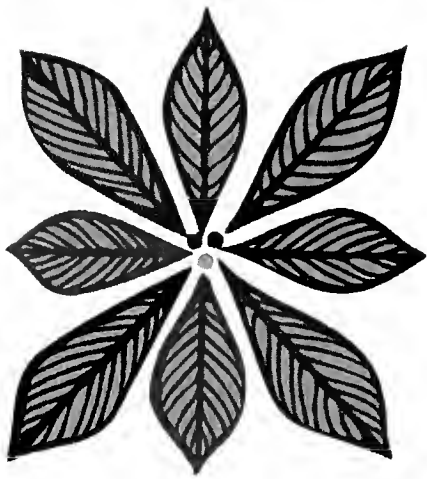
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Although the author imagines that dinosaurs would enjoy a tasty dessert of *Crambe cordifolia* leaves, the blue-gray foliage of relative *C. maritima* might be equally suitable, for it is even grown and blanched for human enjoyment. Both *C. maritima* and *Hosta* 'Sum and Substance' are Great Plant Picks. For more information about plants that grow particularly well in the maritime Pacific Northwest, visit [www.greatplantpicks.com](http://www.greatplantpicks.com).



it, but one day, while up on the third floor deck, looking down on the garden, I saw the big leaves from above. They fanned out, nearly horizontal to the garden floor, in a shape that was beyond bold. My heart raced. They look like footprints, I thought. Dinosaur footprints!

To the list of perennial leaves with Titanic form, one must add *Hosta* 'Sum and



Substance.' Big-leafed hostas just keep coming—an indication, I suspect, that gardeners love these daring plants. But *H.* 'Sum and Substance' which is, by now, an old favorite, is a true winner. The leaves are meat-platter large, yellowish-green in color and happy in a shady spot. A bit of morning or late afternoon sunlight will pep up their yellow





PHOTO BY RICHIE STEFFEN

A setting that seems most fit to host a present-day dinosaur, this tropical-looking pond has *Gunnera manicata* planted along its edge. Hardy in Zones 7 to 10, and only happy with ample moisture, *G. manicata* produces leaves that are sometimes 10 feet wide.

deep purple-red stalks, with whorls of pointed, deep red, shaded-with-blue leaves, are grand, vertical sculpture. When the plant puts out its lacy domes of rosy flowers in late summer, it crowns the garden. Give it rich soil. Having grown this plant for some time, in a grandiloquent flourish of generosity, I cut off a chunk one autumn and gave it to my friend Ingrid Meyer. Ingrid has a solid, passing knowledge of gardening and plants, but she is no gardening scholar. She gardens by instinct or, I've come to suspect, voodoo. She created a spectacular garden in Birdsvew, Washington, near our house in the Skagit Valley, and grew the eupatorium I gave her with astounding success. Astounding!

She put it at the edge of a Douglas fir and spruce grove, where it faces east and receives a bit of afternoon sun. Once established, the plant grew . . . and grew . . . and grew. Soon it topped 12, then 15 feet at summer's end, and the flower heads could have shaded an elephant. I was beside myself. She drove me nuts! I would ask her regularly, in a casual, off-hand manner, how she thought her eupatorium got so big. In her lilting German accent she would say, "Oh, I don't know. It just likes it here, I guess."

I fumed. "Horse manure!" I thought. And then the light bulb went on. "Yes! Horse manure!" Ingrid and her husband Gerhard had horses. That's what she was up to. So I went over to my next-door neighbor's pasture, came home with a wheelbarrow full of horse manure and mounded it around my eupatorium. Two years passed. My plant might have grown six inches.

coloring. Slugs love the new, tender leaves, as dinosaurs undoubtedly would, so it needs protection in spring. But with delicate fuchsias and other shade lovers, this plant is the stuff of an Henri Rousseau painting.

## Joe Pye Weed: Almost Trouble Free

Joe Pye weed, *Eupatorium purpureum*, is high on my list of dinosaur salad plants. Its

Finally Ingrid confessed that her success might have been caused by fallen conifer needles; the massive infusion of acid in the soil could have worked the magic. Now, each winter I cut fir branches and pile them over my eupatorium, where their dry needles cover the crown of my dormant plant. I have my fingers crossed. Given enough water and a good location, this is a trouble free plant. Well, almost trouble free. It did cause some big trouble between Ingrid and me!

When Rosemary Verey was living, she visited our Skagit Valley garden. She loved our place and bragged back in England about her forays into the wild and woolly West. And she hit it off with Ingrid immediately. Why not? They were two country ladies who loved to garden.

So one day, when Rosemary was back at Barnsley House, I received a letter from her: “Do tell dear Ingrid that I got the seed for the eupatorium. Oh goody! I shall take them to Highgrove and plant them at once. I know Sir will be so happy.”

I seethed. I smoked. Highgrove, eh? Prince Charles? MY eupatorium! Ingrid’s seeds! The snort that came out of me must have sounded like Zeus’s horse. I’ve gone to church over this one: “Forgive us our trespasses as we forgive those who trespass against us.” And now, perhaps eight years later, my *Eupatorium purpureum* is, still, maybe, only seven and a half feet tall. Pray for me.

## And For Dessert?

The list of leafy greens for the dinosaur salad bowl continues to grow. Ned Wells, of Wells Medina Nursery, once grew the invasive



**. . . I seethed.**

**I smoked.**

**Highgrove, eh?**

**Prince Charles?**

**MY eupatorium!**

*Macleaya cordata* in a large pot with other perennials. It didn’t miss a beat in captivity and shot up to seven feet, its handsome celadon leaves and stems swaying rhythmically in the slightest breeze. Its plumes of flowers, from which its common name, plume poppy, is derived, are airy and white.

Maurice Horn cautions not to forget the gorgeous, silvery, fern-like leaves of cardoon (*Cynara cardunculus*). For him, in most years, this is an all-seasons plant. Early each September, Maurice goes through his garden, grooming his cardoons. He cuts back flower stalks to the base, so

that the easy-to-root seeds don’t fly through the garden. Then he gingerly removes all the old foliage. He is careful not to disturb the crown. Almost instantly the plant sends up new, vigorous leaves that harden off and stay on the plant, upright and regal, even in snow, through all but the coldest winters. “It’s a striking, silver-blue, large-leafed presence in the winter garden,” he says.

I must mention one last plant: *Crambe cordifolia*. True, its leaves are but a nondescript mound of dark green, hardly worth a passing sniff to a brontosaurus. But this humble plant sends up six-foot stalks that become massive, white clouds of fragrant flowers. It is a heady spectacle in early summer. And while I’ll freely admit that *C. cordifolia* cannot fairly be called dinosaur salad—might I call it dinosaur dessert? ☞

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Former Northwest Bureau Chief of Sunset Magazine, **STEVE LORTON** continues to write and lecture and passionately support the Arboretum. He may be reached at [Stavelorton@aol.com](mailto:Stavelorton@aol.com).



# POWERFUL NEW FINDING-TOOL FOR MILLER LIBRARY VISITORS

BY TRACY L. MEHLIN

Northwest gardeners have a new tool for finding answers to their many, perplexing gardening questions. How do I design a dry-creek bed? What shrubs can I plant in my wet, clay soil? What's the latest research on mycorrhizal soil fungus?

The answers may be found in periodic literature: the glossy gardening magazines and scientific research journals that are published periodically throughout the year. But the trick has been finding articles with answers. Now, at the Elisabeth C. Miller Library, a subscription database called the "Garden, Landscape & Horticulture Index" is available to search over 300 titles related to gardening, botany, design, ecology and arboriculture.

## ***Why Search Periodicals?***

Since some subjects are too current to have been included in a book, it can be advantageous to search periodicals. Books can take many years to produce, whereas a magazine needs only a few months of lead time to publish an article. (Peer-reviewed scholarly research takes a few additional months to publish.) For example, cultural details about a newly introduced perennial are often described in magazines long before being included in a book.

In addition, some topics are too small to

warrant a full-fledged book—another reason to use the "Garden, Landscape & Horticulture Index." Exploring how to grow "living sculpture" out of willows is a perfect example.

Finding a broader range of perspectives is another advantage of periodic literature, where the ideas of many authors who have written on the same subject can be

compared. At other times, what's needed is an expert's summary of a complex issue, rather than an entire book on a topic.

More focused than a Google search, the "Garden, Landscape & Horticulture Index" searches only professionally published articles. At this time the database contains only article citations

and not the full text, so a short walk to the periodicals stored on the library's shelves is required. High quality information makes the trek well worth it.

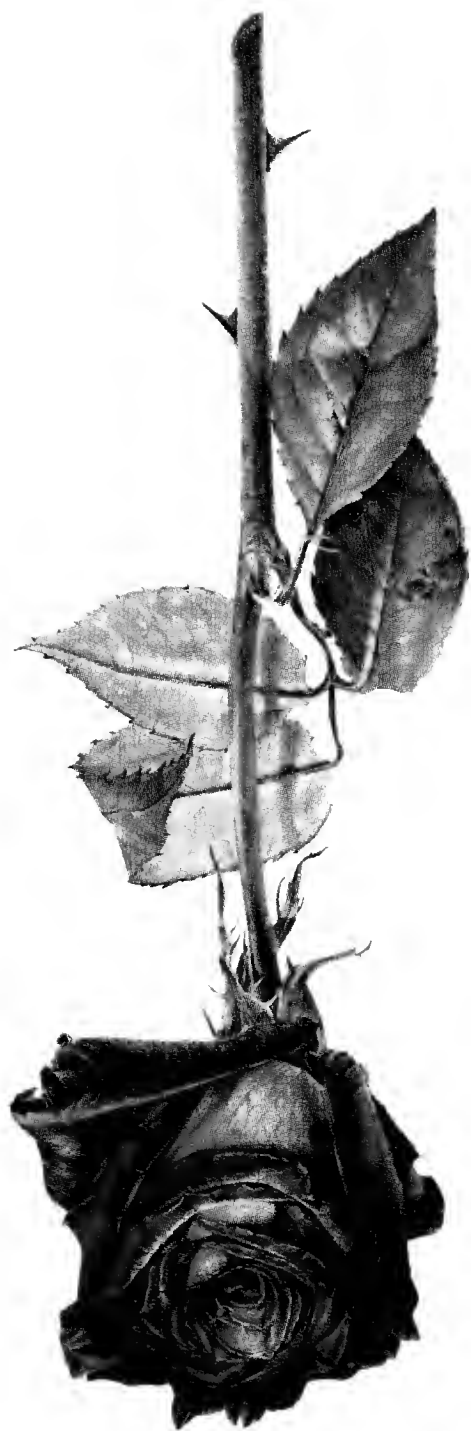
The "Garden, Landscape & Horticulture Index" is a subscription service—not a free Web site—but it is available without charge for curious gardeners visiting the Miller Library. So come in and learn how to use this fabulous new tool! ♪



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**TRACY L. MEHLIN** is the information technology librarian at the Elisabeth C. Miller Library of the University of Washington Botanic Gardens.

## Jean Emmons Reveals



*Rosa* 'Black Bacarra' (11" by 4"  
watercolor on calfskin vellum).



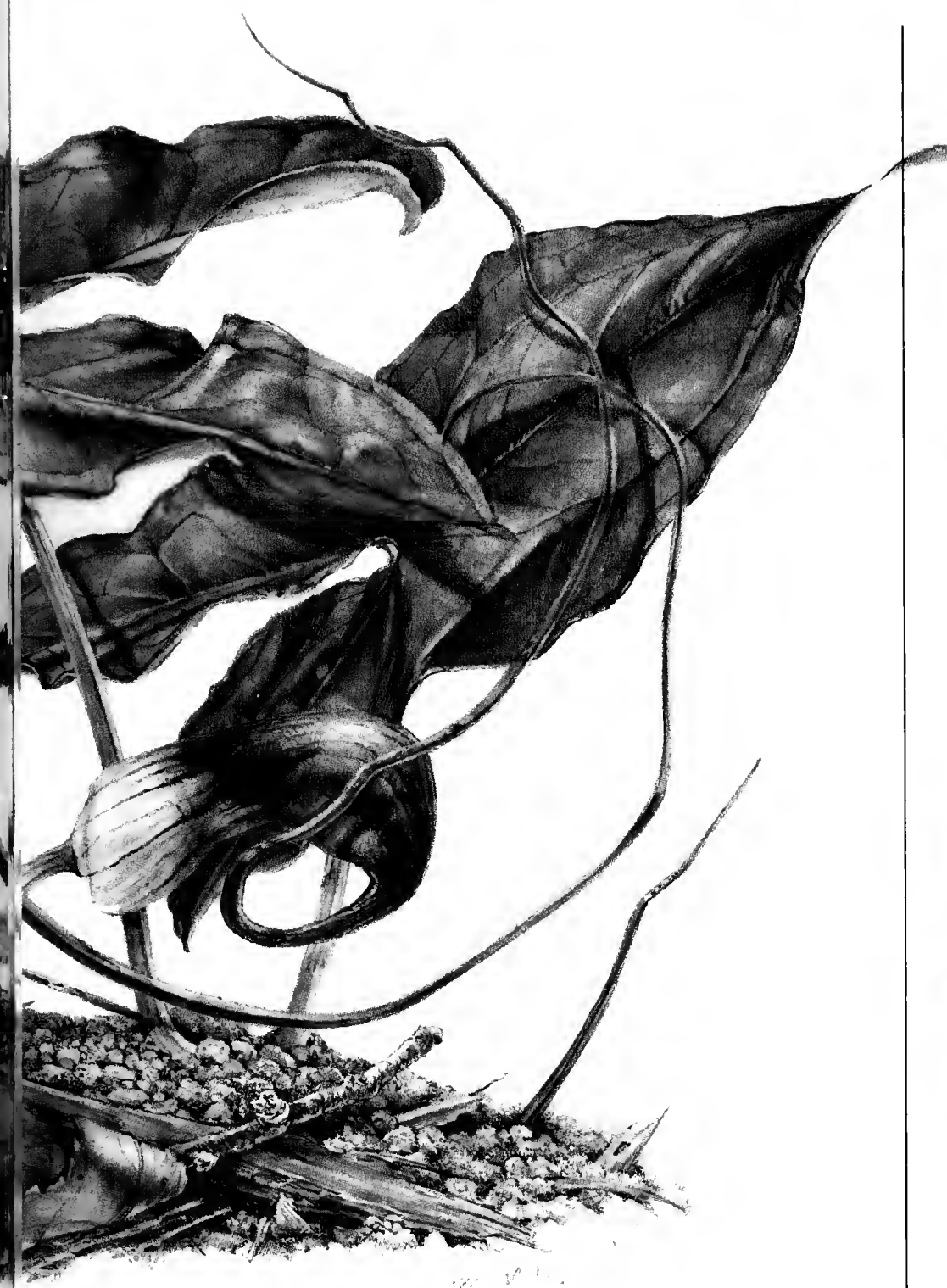
*Arisarum proboscideum*, the Mouse Plant

## From Mysterious Mushrooms to

Washington Island botanical artist Jean Emmons embraces the reality of decline, death and the compost heap. "I'm kind of into debris," she says. "The older I get, the less I like to paint beautiful, fresh flowers. Sinister arums, mysterious mushrooms and rotting vegetables appeal to me now."

What about audience expectation for pretty flower paintings? Another good thing about getting older, says Jean, is that she doesn't worry about that. And she doesn't need to. Even this most modest of artists has to confess, "I've been getting quite a bit of attention lately." Her work has helped put our corner of the country on the map for

# the Beauty of Botany



6" by 7" watercolor on calfskin vellum).



*Cucurbita pepo* & *Cucurbita maxima*  
(16" by 19" watercolor on bristol).



*Vitis vinifera* 'Purpurea' in Autumn Color  
(6" by 8" watercolor on calfskin vellum)

## otting Vegetables — By Val Easton

botanical art—a fact to be displayed this autumn when Seattle, for the first time, hosts an international juried exhibition called “The Beauty of Botany.” (See box for details.)

### Recent Awards: Nothing Routine!

Despite, or maybe because of, Jean's preference for painting dead leaves, turnips

and dahlia tubers rather than flowers, she's on a roll. Honored, last June, with a gold medal from the Royal Horticultural Society (RHS) Exhibit in Birmingham, England, for her series of Pacific Coast iris paintings, Emmons describes the big international show as the “Olympics of botanical art.” In preparation, Emmons grew an assort-



ment of Pacific Coast hybrid iris for four years, painting them as they came into bloom. Eight of her life-size iris works were exhibited, along with art by 80 other selected artists from around the globe. "It was the best morning of my life," says Emmons, for not only did she bring home the gold, but the RHS Lindley Library purchased four of her paintings for their permanent collection.

Last fall, Jean won the prestigious Diane Bouchier Founder's Award for Excellence in Botanical Art, presented by the American Society of Botanical Artists. And she was thrilled to be singled out by the New York Times for a painting she submitted to the Eighth Annual International Juried Botanical Art Exhibition at the Horticultural Society of New York. The November 11, 2005, issue of the New York Times read, "The old-fashioned art of botanical illustration lives on, as evinced by this selection of finely made drawings and watercolors. ... Many are routinely competent, but some, like a small, intense picture of a gnarly root ball by Jean Emmons, are remarkable for both what and how they represent." The journalist zeroed in on what is so special about Jean's work: There's nothing routine about it. It's not only what Jean chooses to paint, but her powers of observation, keen color sense, and appreciation for what she sees before her that infuse her work with such luminosity and intimacy. Let alone her training, skills, patience, sensibility and head-over-heels love affair with the plant kingdom.

### **"There Is Such Beauty in Decay."**

Perhaps Jean explains it best when she says, "Botanical art is a niche art, but the best goes beyond that." And so her detailed paintings of hooded arums, past-their-prime gourds and weird little mouseplants (*Arisarum proboscideum*) take on a beauty and poignancy that touches us in a way that the merely pretty never does. "I used to paint plants in their most pristine, ideal state, leaving out all those holes and blemishes. Now, I am interested in

painting plants past their prime. Diseased, scarred, wilted: the marks of their history are upon them. Each plant becomes an individual, no longer a general specimen. There is such beauty in decay," explains Jean, who, as you might expect, is a fan of the Japanese concept of *wabi sabi*.

Although Jean has been fascinated by plants and nature since her childhood in Pennsylvania, she began her artistic career as an abstract painter. But then, like so many of us, she fell down the slippery slope of gardening obsession. This full-throttle slide into garden mania, coupled with her interest in scientific illustration, led her to botanical painting. Her technique is based on medieval manuscript illumination, which she learned from the late Kevin Nicolay, a Seattle horticulturist and self-taught botanical artist. With its ability to suggest light moving through layers of plant tissue, this time-consuming watercolor method suits her subjects well. Lately Jean has been painting on calfskin vellum, a difficult medium that changes through the course of the painting, wrinkling up in humidity. "There's an eerie 3-D quality to it; it almost glows," she says. The paint isn't absorbed into the vellum, but sits on its surface, giving more volume and texture to her work.

### **Painting From Life**

If Jean's earthy subject matter doesn't disabuse the notion that botanical art is a genteel, Victorian-era pursuit, then a couple of Jean's stories will put that myth firmly to rest. "People always ask if I work from photographs. No. As in any kind of portraiture, a live specimen is best. As long as you don't mind having skunk cabbage stinking up your refrigerator," she says.

Jean tells the story of a French botanical artist who specialized in painting bee orchids (*Ophrys apifera*) that grow wild on limestone cliffs. Bee orchids are endangered, so can't be picked—which meant that the artist had to lie down for hours to draw their tiny, lovely

portraits up close. Distracted from her work by a shadow's passing overhead, the woman looked up to see buzzards circling, lured by her prone and motionless position. Who would have thought botanical illustration could be so rugged, let alone dangerous?

Of course, Jean's choice of subjects makes her job a little dicier than if she painted roses (which she has, actually, but hanging upside down, bound and wilted, in surprisingly lovely paintings). "I like to paint smelly, fly-pollinated things," says Jean. "And right now I'm growing mandrake (*Mandragora officinarum*) and hoping it makes those little, green, egglike fruits. And I'm making friends with *Sarracenia* people." *Sarracenias*, or pitcher plants, are carnivores.

Botanical art is in vogue—in part, because realistic art is back in style. Gardening is a popular hobby, and people are interested in environmental issues. All these factors have led to a surge of interest in this traditional art form, which, it turns out, is anything but traditional. While trends may be set by British and Japanese botanical artists, the United States is coming on strong. The local Pacific Northwest chapter of the American Society of Botanical Artists had 35 members a dozen years ago and now boasts a membership of 1,200. Some are collectors, but most are artists. And many of these are gardeners. "You can tell which artists garden and which don't," says Emmons. "In the work of a real gardener, you'll see the lichen and the blackspot." No wonder we find botanical art so compelling, for in it we recognize our own plants and gardens, our joys,

struggles, achievements and acceptance of nature's realities.

### Painting "The Life Force"

This October we'll have the opportunity to see the work of the world's finest botanical artists displayed in Seattle. Organizers are expecting at least 300 entries from as far away as Australia, the Netherlands, Scotland, Korea and Japan, as well as from England and across the United States. Forty to forty-five pieces will be chosen for this exhibit hosted by the Pacific Science Center.

But don't come to the show expecting to see idealized flower pictures. "Plants are more about the life force than prettiness," says Jean. "Flowers are just their sex parts, and that's only one part of their lives." The highlights? Jean's own work, of course, along with that of other Northwest botanical artists. Jean told me a tale of an artist who is traveling to Highgrove to paint Prince Charles's secret stumpery. Really. And I'm hoping to see a French painting where the shadow of a buzzard's wing falls across the beauty of a bee orchid. ♪

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**VAL EASTON** writes regularly for a variety of gardening magazines, including the weekly column "Plant Life" in Pacific Northwest Magazine of the Seattle Times. Her new book, "A Pattern Garden: The Essential Elements of Garden Making," will be published by Timber Press in January 2007. She may be reached at [valeaston@comcast.net](mailto:valeaston@comcast.net).

## JEAN EMMONS & "THE BEAUTY OF BOTANY"

If you would like to make an appointment to see Jean Emmons's work at her Vashon Island studio, you can reach her at [jean.emmons@gte.net](mailto:jean.emmons@gte.net) or (206) 567-5458.

The American Society of Botanical Artists (ASBA) and the Pacific Science Center present "The Beauty of Botany," an international juried exhibition of contemporary botanical art from October 13 to November 26, 2006, at the Pacific Science Center in Seattle. If you have questions, check the ASBA Web page ([www.amsocbotartists.org](http://www.amsocbotartists.org)) or send your inquiries to Jean at the e-mail address above.



# How Can We Win the War on Weeds?

TEXT AND PHOTOS BY JEANIE TAYLOR

Seattle's greenbelts and natural areas are in various stages of invasion by exotic weeds. The sad state of our urban forest is not unusual: all over the world, people are concerned about how to reclaim and recreate habitats that are at least reminiscent of uninvaded ecosystems. Revegetation and restoration are laudable and popular activities in Seattle; neighbors continue to come together to form "Friends" groups for local parks, and now the Green Seattle Partnership plans to expand these projects enormously (see [www.cascadeland.org/GreenSeattlePartnership.htm](http://www.cascadeland.org/GreenSeattlePartnership.htm)). However, it is useful to evaluate current

methods and progress in revegetation and invasive species control before more and larger projects are begun.

Frink Park is a local natural area typical of most in the Seattle Parks system: there is a famously dedicated Friends group and a well-written and well-intentioned vegetation plan, and volunteers have put thousands of hours into weed removal and replanting. Vegetation-management plans usually call for removing invasives and replanting with native vegetation using volunteer labor, but there is *no mention of how, how much, or where the invasive problem is best addressed*. This is the source

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Sword ferns grow large under native trees and shrubs in this section of Frink Park, which was gradually cleared of ivy—a prime example of incremental, low-impact weeding.



of many problems down the road. Volunteers and paid crews log thousands of hours removing invasive plants and spend thousands of dollars on plant material to “restore” natural vegetation, but, all too often, weeds return. Sometimes they eventually smother new plantings just as completely as before. This is demoralizing to volunteers who work very hard in all sorts of weather to improve a beloved forest or meadow. This situation occurs because of two flaws in the way the initial problem is approached.

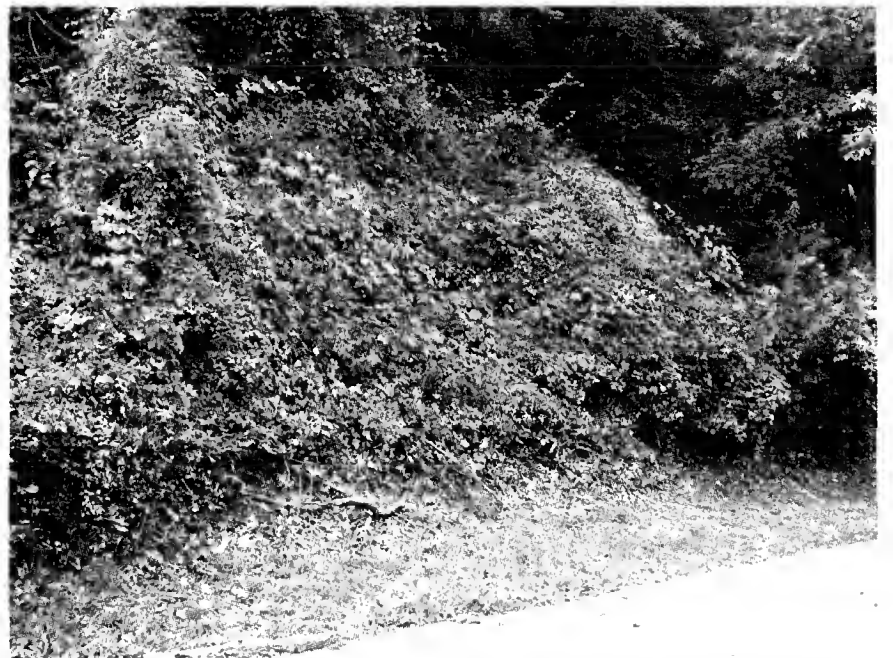
### Flawed Problem-Solving

First, volunteers are often overly optimistic about how much work it takes to get rid of the ivy, holly, laurel, cotoneaster, blackberries and a host of less well-known invaders; weeds do not disappear after one or two weeding parties. As discussed below, it is advisable to look further into the future and to help volunteers see the wisdom of the long view. We also sometimes forget that the urban forest is like an island—continuously assaulted by new invasions, carried by birds, wind and boots. After the initial work is done, natural areas need to be maintained almost continuously. This is not rewarding for volunteers and, in fact, is a job for a regular labor force paid to perform maintenance.

Second, we are working against our own interests by *clearing too much at once*. What appears to be a monoculture of ivy or clematis is usually suppressing some other weed or weeds, and those weeds immediately take over the empty space when the offender is removed. The act of removal actually encourages weeds: it affords them more space, light and disturbed ground. If we target ever-larger tracts of land, this flaw in our thinking will magnify many times over.

### The Bradley Method

Frink Park shows evidence of these problems, but fortunately there is also dramatic evidence of the usefulness of what might be



**TOP:** The “dark side” horrors of Frink Park—*Clematis vitalba* blankets trees and thickets of blackberries alike and threatens to re-invade weeded areas.

**MIDDLE:** A well-weeded area, ready for supplemental planting.

**BOTTOM:** A common problem: Ivy and other weeds hide natives planted by volunteers.



These trail steps divide an invaded zone from a healthy one; vigilance is necessary to hold back the constant threat of weedy tendrils and runners.

called the “slow-weeding movement.” An approach known as the “Bradley method” is used worldwide for invasive species control. It is named for two sisters who lived in New South Wales, Australia, and its low-impact techniques have worked with spectacular success to regenerate weedy natural areas. These are the main principles of the method:

- 1) Always work from a good (i.e. intact, native) area outward.
- 2) Keep disturbance to a minimum, even using care in removing individual weeds so removal does not tear up and disturb the surrounding area.
- 3) Do not overclear. (All the work the Bradleys did was *incremental*—one hour, or a few hours at a time, on a regular basis—rather than a huge, exhausting effort all at once.)

The Bradley method *leverages* intact vegetation against weeds, rather than clearing solidly weedy areas and replanting immediately. In fact, it does not rely on replanting primarily, and the careful avoidance of disturbance is crucial to the success of the technique.

In the southwest corner of Frink Park, one person has been applying this technique. Hand removal of ivy has freed the existing vegetation without disturbing or compacting the soil

excessively. A light touch and repeat passes over the area to remove the resprouts have paid off. The weeded area has healthy-looking understory and canopy layers. This is a great accomplishment. Unfortunately, just across the path is the “dark side” where the invaded forest lurks, always threatening to send tendrils across to inundate the “clean” forest. It is vitally important that volunteers be rewarded for this incremental effort and be educated about what expectations are realistic: in the *process* of regeneration of a plant community, the timeline for success is longer, or it may take more people working regularly to achieve success.

*What are the benefits of improved techniques?* With a more gradual method, a lot of effort can be saved on follow-up weeding, compared to areas that were cleared and left vulnerable to new invasions. (This includes large areas covered with wood chips after weeding.) Budgets for labor and plant materials can go further because of greater efficiency in the long term. In “clean” areas, if the area looks a little empty after weeding, plants can be added. It’s important to remember that native plants added to an already-existing mix of natives don’t need as much support in the form of watering and extra weeding, and intact, below-ground microorganisms can help get new plants off to a quicker start.

### Management and Monitoring

*Is the Bradley method always effective in all situations?* Most likely, not. A one-size-fits-all approach is the opposite of *adaptive management*, which is another piece missing from our urban forest policy. Adaptive management requires the use of sound scientific techniques to plan strategies, site plots, measure and evaluate results, and apply that information to modify and adjust methods to each type of site, until our goals are met by the most efficient and effective means possible. It is an experiment with no chance of failure, only degrees of success. That a public initia-

tive exists to address the problem of urban forest degradation presents a unique opportunity to *document* our problem solving from the beginning. Data collection and monitoring can provide information about how money is being spent, on what activities, *and for what quantifiable results*. We need to learn adaptively from our mistakes, and we have the opportunity to provide this information to others as we accumulate experience.

*What will it cost to implement a monitoring program?* The amount of time to collect and analyze data *should be budgeted* in a credible monitoring program to track progress, labor and material costs, as well as plant survivorship. The cost of *not* using scientific methods is a question rarely asked. Study sites need to be set up and monitored regularly by the personnel working on them. Record-keeping and analysis may be streamlined with standard forms. For every hour spent in the field, a five- or ten-minute data record could be sufficient. The time required to analyze the information should be part of the office time budgeted for oversight and would depend on the number of projects. For instance, the 10 percent more time spent on looking at how best to approach the project might well be recouped by savings in time, materials and better organization.

*Unless we make maintenance and monitoring our priority in landscape revegetation—ahead of clearing and planting—we will continue to make the mistake of clearing more than we can manage and end up creating more opportunities for invasion.* As more money becomes available, the need for auditing becomes more important. A sustainable, successful program requires productive use of public involvement and education, as well as smarter landscape rehabilitation.

*Why should we care about labor costs if the labor is provided by volunteers?* Volunteers are often enlisted to accomplish tasks, such as weeding, because they are too expensive to pay for. But volunteers should be seen as



A pleasant walk down a path  
in a regenerating native forest cleared  
of invasive species.

the valuable resource they are: they need to feel rewarded for their work. They may enjoy their tasks more if they involve identifying and working with natural vegetation. If volunteers can watch natural regeneration from intact areas outward, they will feel more of a connection to an *ecological process* than if they merely weed and plant. A happy volunteer will return more often and might become a cherished “super volunteer” who makes a long-term commitment. And, as has been demonstrated, persistent, manageable work sessions by dedicated volunteers are the most productive. ∞

**JEANIE TAYLOR** is a senior gardener with Seattle Parks and Recreation. She is currently finishing a Master of Science in Conservation Biology at the University of Washington Botanic Gardens.

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[www.casparcommons.org/Gorse/BradleyMethod.htm](http://www.casparcommons.org/Gorse/BradleyMethod.htm)





# Cherry Bark Tortrix Update

TEXT AND PHOTOS BY TODD MURRAY

As reported in the Summer 2001 Bulletin, the destructive cherry bark tortrix (CBT) moth, *Enarmonia formosana*, was first found in lower mainland British Columbia, Canada, in 1990. CBT was subsequently discovered in the United States in 1991 at Peace Arch Park in Whatcom County.

Since its discovery, CBT has spread southward and can currently be found south of Portland, Oregon. It is believed that CBT came to North America from Europe and Eurasia. CBT is found throughout Europe, coastal North Africa and as far east as Siberia, but, curiously, CBT is scarcely a problem in these areas and rarely

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**INSET:** Adult moth of the cherry bark tortrix.

**BACKGROUND IMAGE:** Infectious nematodes under magnification.

# STILL MANAGING CHERRY BARK TORTRIX AT WASHINGTON PARK ARBORETUM\*

BY DAVID ZUCKERMAN

Cherry bark tortrix (CBT) was first discovered on the flowering cherries in Washington Park Arboretum in 1998; and in 2000, researchers observed high threshold levels of the pest. An Integrated Pest Management (IPM) program, which we continue to follow successfully, quickly ensued. It includes the following activities:

- Monitoring frass tube in early October, when insect flights are finished.
- Following-up immediately—if CBT threshold levels warrant chemical application—with fall spot-treatments of infested tree parts using a synthetic pyrethrin (e.g., bifenthrin).
- Following, in general, a “no-prune” policy, and when absolutely necessary, pruning only within the narrow, late fall CBT “no-fly” window.
- Keeping cherries as healthy as possible with appropriate watering and mulch rings.
- Replacing cherries in poor condition with new, brown rot-resistant cultivars. Over 20 new cherries have been planted along Azalea Way since 2001.
- Staying abreast of WSU research on biological controls, i.e., parasitoid wasps and nematodes. Presently, no biological control is effective.

## ***Vulnerable Mountain Ash Specimens***

In late summer of 2003, CBT was discovered on one mature *Sorbus* (mountain ash) species located in the Brian O. Mulligan *Sorbus* collection. CBT’s host range includes *Sorbus* as well as many other rose family genera. Subsequent fall monitoring revealed eight other affected *Sorbus* species.

To our surprise, a few of these were younger trees with infestations discovered at the root crown level. Because of the absence of fresh pruning wounds or graft unions (*Sorbus* species only), it was determined that over-mulching was the culprit, inviting CBT into the vulnerable root crown/trunk collar zone. We pulled the mulch back from the root crowns and also treated all CBT-infested *Sorbus* with bifenthrin in 2004.

Our most recent *Sorbus* monitoring indicated almost 100 percent control of CBT on the affected specimens. However, 11 new trees of varying age were found with CBT frass tubes. Again, these easy CBT entry points were predominantly located around the root crown/tree collar zone within bark cracks and fissures. For precautionary measures, affected trees were treated in early spring of 2006. (Timing was still within the “no-fly” period.) We will follow up with fall monitoring and, if necessary, treatment, as well.

Overall, with IPM diligence and action, we remain optimistic about controlling CBT and about the future of the cherry and *Sorbus* collections in Washington Park Arboretum. ~

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**DAVID ZUCKERMAN** has worked in the Arboretum since 1982; currently he serves as horticulture staff supervisor.

*\*Articles on the arrival of cherry bark tortrix in the Northwest, and its effect on the Arboretum’s cherry trees, were first published in the Summer 2001 Bulletin.*

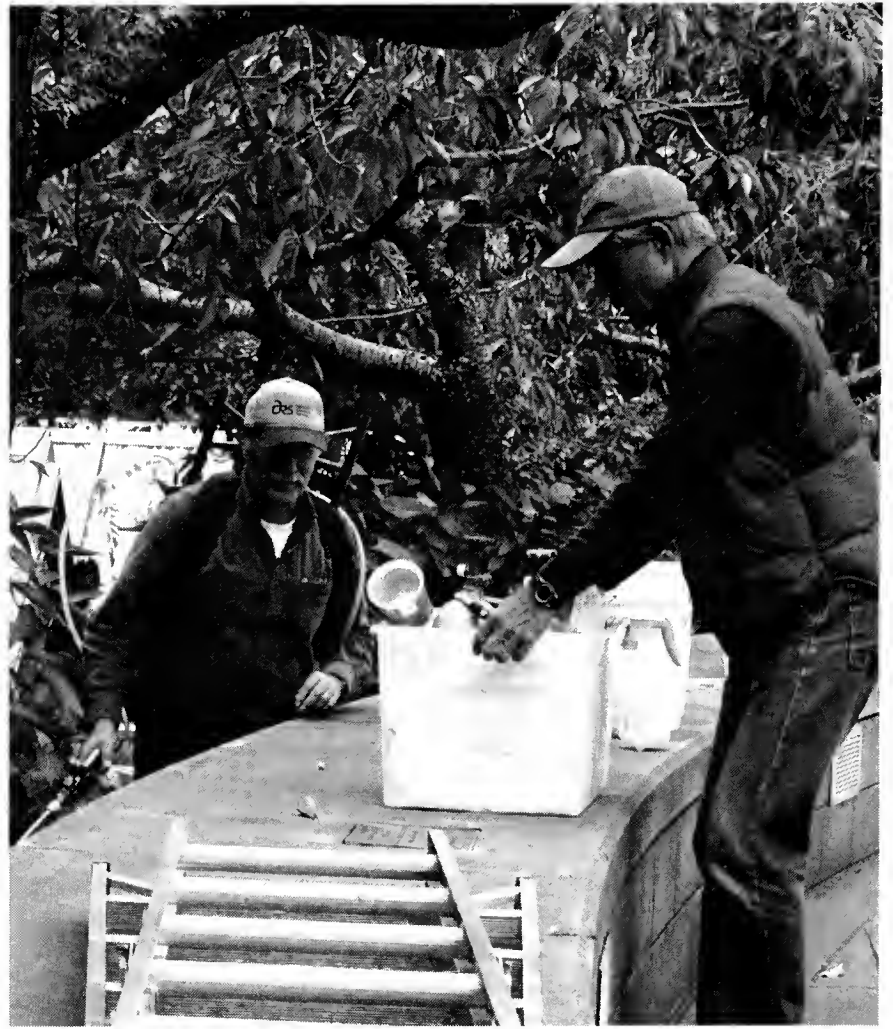
requires treatment. In native locales, CBT is controlled naturally by other organisms, such as parasitic wasps and diseases.

## The Beautiful Beast

If you are so lucky as to run across the inch-long, adult CBT moths, you will discover that they are rather beautiful. The forewings are mottled dark and light brown. Along the front of the wing, there are stripes of orange, dark purple and silver. The larvae are of typical caterpillar shape and are usually transparent, with a pinkish lining in the gut. Mature larvae reach the length of one to one and a half inches. The eggs are very small, oval and salmon pink.

In the Northwest, there is one generation of CBT per year. Adults fly and lay eggs from April to September. Females deposit eggs in the cracks, crevices, wounds, crotches and lenticels (small, natural openings in the bark) of trees. Eggs hatch after a couple of weeks, and the first caterpillar larvae forage for entrance into the tree bark. Once the larvae gain entrance through an opening in the bark, the caterpillars burrow deeper into the tree's living tissue, down to the cambium. Here the larvae feed until the next spring. The caterpillars mine out winding tunnels in the bark, all the while constructing a "frass tube," which is attached to the tunnel's entrance and consists of frass (digested food) and silk. The frass tube is a unique adaptation that keeps predators from entering the tunnel, protects the caterpillars from the outside environment and provides a safe site to pupate.

CBT attacks practically all rosaceous trees in the Northwest, including apples, cherries, plums, apricots, almonds, peaches, cherry-laurels, quince, firethorns, photinia and hawthorns. In addition, CBT threatens many of our native trees, such as black hawthorn, bitter cherry and Oregon crabapple. Damage to the tree is noticeable by dieback and premature wilting of the canopy. In fact, large



Lerry Lacey (US Department of Agriculture—Agriculture Research Service Wapato) on the right, and Lynell Tanigoshi (Washington State University Vancouver Research and Extension Unit) on the left, prepare to treat cherry trees at Seattle University.

populations can girdle and kill trees. More importantly, CBT damage opens trees up to all sorts of dangerous mortality factors, leaving them susceptible to bacterial and fungal diseases, frost damage and other insect pests. All these factors can decrease the vigor, life span and fruit and flower production of infested trees.

## CBT Control Alternatives: Insecticides, Cruisers and Ambushers

I'm not a big fan of using insecticides. However, a well-chosen, well-timed insecticide application has managed CBT infestations of ornamental rosaceous trees in the Pacific Northwest. (Current insecticide recommendations apply only to ornamental trees.) Drs. Lynell Tanigoshi and Bev Gerdeman of Washington State University, and Dr. Lerry

*continues on page 33*



# Peter Valder and “The Garden Plants of China”

BY ROY L. TAYLOR

PHOTOS BY PETER VALDER

Mark your calendar! A great botanist, gardener and author, Peter Valder, will give the September, 2006, Elisabeth Carey Miller Memorial Lecture at the University of Washington. An Australian by birth, Valder grew up on family property at Mount Wilson, a small farming settlement in the Blue Mountains of New South Wales, about two hours' drive west of Sydney. The property,

known as Nooroo, became well-respected as an outstanding farm and garden. Featured on a \$2.00 Australian postage stamp in 1989, the garden is now open to the public.

Nooroo, a working farm and orchard with livestock and extensive gardens, provided most of the family's food. Valder says that he and his younger brother loved the simple life and gained great appreciation for all living creatures and the vegetation that provided their liveli-



*Camellia reticulata* 'Hentiangao' at the Bamboo Temple, Kunming, China.

hood. As children, they actively explored the bush and made collections of local plants, birds and animals.

Valder's love of gardens and plants developed at Nooroo. The house and garden had been established in 1880, almost 40 years prior to his father's taking over the farm in 1919. Mount Wilson had a strong Country Women's Association that organized open gardens, continued to create awareness of the local flora, and introduced plants from other regions of Australia. Valder and his brother had their own gardens, so he was "flung headlong into gardening from an early age."

Valder's early elementary education took place in Mount Wilson; when he was 10 years old, he was sent to a Sydney boarding school. There he won a scholarship to the University of Sydney and later a second scholarship to attend the University of Cambridge in England, where he received a Ph.D. in plant pathology and mycology. Ultimately, Peter returned to



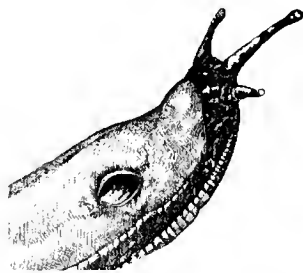
A spring scene in Zhongshan Park, Shenyang, with *Prunus triloba* on the left, a large apricot (*P. armeniaca*) on the right and *Forsythia suspensa* in the background; all are plants native to north China.

Australia to begin a research and teaching career at the University of Sydney.

Valder continued to work on the garden at Nooroo after he returned from England.

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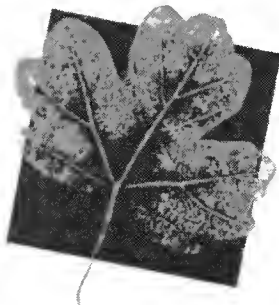
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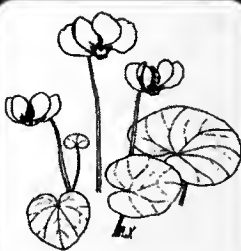
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My wife Janet and I had the pleasure of visiting Mount Wilson on a tour that he led at the time of the International Botanical Congress held in Canberra and Sydney in 1981, and attending that organization's premier of a new Australian Broadcasting Corporation film that provided an introduction to the wild and wonderful flora and fauna of Australia and was narrated by Valder. We also visited him at Nooroo in 1990 and were amazed that he had turned the family tennis court into a container collection of wisteria—a remarkable sight! In 1995 Valder published "Wisteria: A Comprehensive Guide," which was the first, definitive English-language book on the genus.

In 1984, the University of British Columbia (UBC) Botanical Garden initiated a cost-sharing program to host speakers from overseas and send them on a circuit through public gardens in Canada and the United States. Valder was the program's first speaker, providing a glimpse

into gardens other than the English gardens so familiar to North American gardeners. His unique blend of information and hilarity got the program off to a highly successful start. I look forward to hearing Peter Valder provide us with new insight into how and why Chinese plants may play an increasingly important role in Pacific Northwest gardens. I know from experience that this humorous, engaging speaker will teach us much that is new and intriguing about our garden world. ♪

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**ROY TAYLOR** is a retired botanist, currently living in Lantzville, B.C. He is a member of the boards of the Elisabeth C. Miller Garden and the Bloedel Reserve. He has been director of UBC, Chicago and Rancho Santa Ana botanical gardens. He is the author of many books and articles and has particular expertise in the native plants of British Columbia.



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# Chinese Plants Revered

BY CAROLYN JONES

PHOTOS BY PETER VALDER

*M*y first hint of the significance of plants to the Chinese came not through learning about Chinese plants or gardens per se, but from reading the unforgettable and unexpectedly poetic “Wild Swans: Three



Daughters of China” by Jung Chang. Chang begins this work of non-fiction in 1909, tracing the life of her grandmother, her parents and finally her own history through the turbulent years of war and revolution in China. During the darkest days of

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**ABOVE:** The wisteria bridge in Liuyuan Garden, Suzhou, China.

**INSET:** The blossom of an unnamed tree peony found in the tree peony garden at the Kunming Zoo, now occupying the site of an old imperial garden.

the Cultural Revolution, when individuality was punishable by death, her grandmother used plants to maintain her femininity. I recorded the favorite passage in my reading diary, as follows:

“My grandmother kept her hair tied up in a neat bun at the back of her head, but she always had flowers there, sometimes a pair of ivory-colored magnolias and sometimes a white cape jasmine [i.e. gardenia] cupped by two dark green leaves, which set off her lustrous hair. She never used shampoo from the shops, which she thought would make her hair dull and dry, but would boil the fruit of the Chinese honey locust and use the liquid from that. She would rub the fruit to produce a perfumed lather and slowly let her mass of black hair drop into the shiny, white, slithery liquid. She soaked her wooden combs in the juice of pomelo seeds, so that the comb ran smoothly through her hair and gave it a faint aroma. She added a final touch

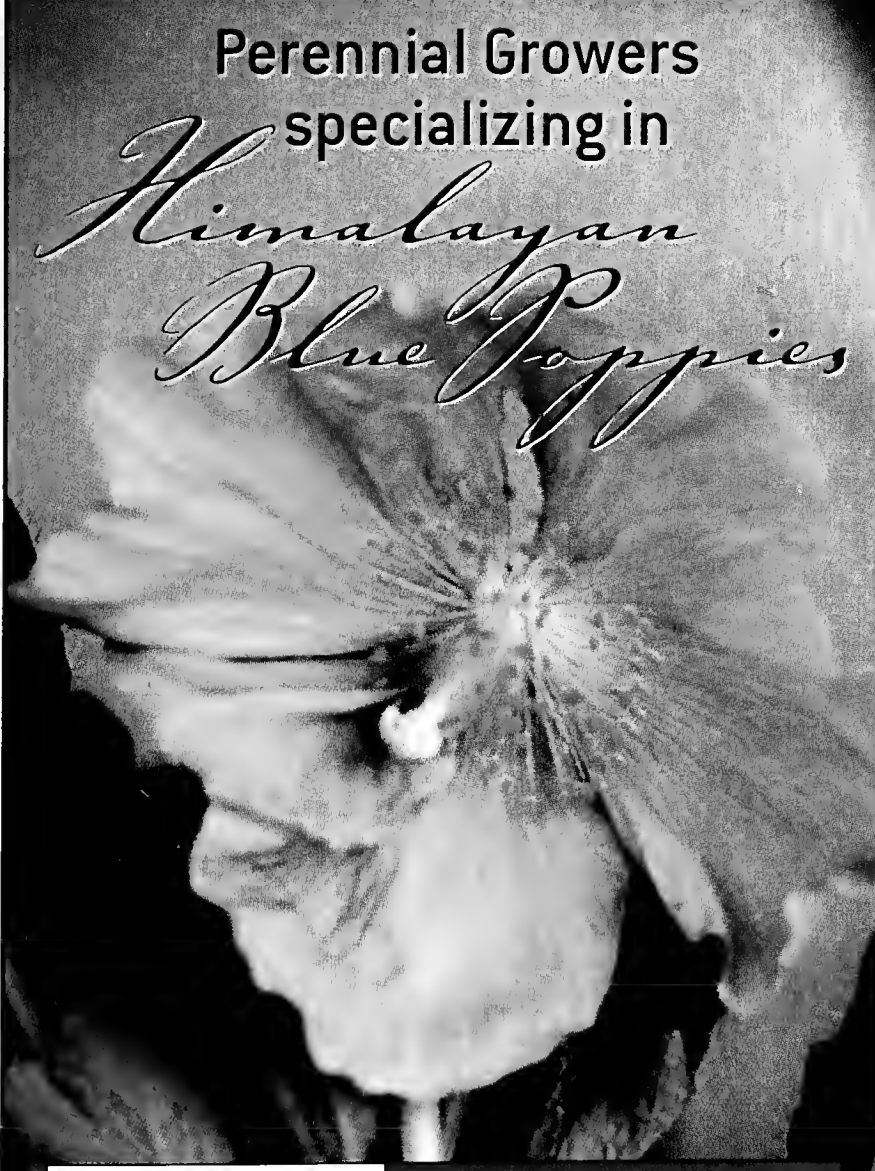
by putting on a little water of osmanthus flowers, which she made herself, as perfume had begun to disappear from the shops. I remember watching her combing her hair. It was the only thing over which she took her time. She did everything else swiftly.”

This same spirit of reverence infuses Peter Valder’s books on Chinese horticulture and garden making. “Garden Plants of China”



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(1999) draws on Valder's extensive travels to China and his keen observations as a botanist and gardener. We gardeners are in the midst of an influx of wild plants from China, brought to the Pacific Northwest by plantsmen, such as Dan Hinkley (Heronswood Nursery), Steve Hootman (Rhododendron Species Foundation) and Peter Wharton (University of British Columbia [UBC] Botanical Garden). But hundreds of years ago, cultivated plants—those that had been carefully selected and

propagated in Chinese nurseries and gardens—won our collective gardening hearts. Chrysanthemums, peonies, wisterias, flowering cherries and azaleas enrich most temperate gardens. Discussing over 400 garden plants, Valder gives us deep insights into how these plants came to be used, not only in Chinese gardens but in art, literature, in symbolism and—as noted above—in everyday life.

Published in 2002, "Gardens in China" focuses on over 200 Chinese gardens that Valder had visited. It contains more than 500 photographs and many reproductions of pertinent historical art. Valder's rich academic background shines through as he outlines the history of garden-making in China. He describes gardens not previously shown in any other Western publications, including palace courtyards, temple gardens, ancient burial grounds, public parks, botanic gardens and arboreta. His treatment of each includes its location, history and plants.

In addition to these books, Valder published "Wisterias: A Comprehensive Guide," which is currently out of print. However, both of the China books will be for sale at Valder's lecture in September. They make essential reading for travelers to China or for those who are curious about garden history in general or Chinese culture in particular. The inside word on Valder is that he is also a hilarious lecturer. If you are interested in receiving an invitation to the Elisabeth Carey Miller Memorial Lecture, which is free, please send your name and complete address to [info@millergarden.org](mailto:info@millergarden.org), or mail it to the Miller Garden at P.O. Box 77377, Seattle, WA 98177. Invitations will be mailed in July, and reservations taken in August. The lecture is at the University of Washington's Meany Hall on Thursday, September 14, 2006, at 7:30 p.m. ~

**CAROLYN JONES** is the director/curator of the Elisabeth Carey Miller Botanical Garden.



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# CHERRY BARK TORTRIX UPDATE

*continued from page 26*

Lacey of the United States Department of Agriculture Research Service, have teamed up to explore insecticide alternatives for managing CBT.

Instead of insecticides, a microscopic worm has been recruited to help wage war on CBT. Entomopathic nematodes are naturally occurring worms that feed on soil-dwelling insects, such as root weevil larvae. Nematodes use two strategies to infect insect hosts. Some nematodes are cruisers that swim through the soil, using the smell of insect breath to find their hosts. Some nematodes are ambushers that sit and wait for insects to come to them. Some nematodes use both strategies. When an insect host is encountered, the nematode gains access to its host by any available orifice. Once inside, and when conditions are right, the nematode regurgitates symbiotic bacteria that begin to digest the insect inside out. The symbiotic bacteria help overcome the host's defenses and create an insect soup for nematodes to feast on. The nematodes reproduce for several generations, until the host ruptures and disperses millions of infectious nematodes to find more hosts.

## **Spraying Nematodes? "That's Just Crazy!"**

For many years, pest managers have used insect-feeding nematodes to suppress soil pests. But spraying soil-loving nematodes on cherry trees? That's just crazy! Nevertheless, Lerry Lacey has experimented with different formulations of wetting agents (chemical additives that make surfaces very wet) and using nematodes on tree bark to kill overwintering codling moth. Since Lacey's formulations have been helpful to orchardists managing codling moth larvae hiding in tree cracks and crevices,

he decided to try it on codling moth's close cousin, CBT.

In recent years, in the Seattle area, Lacey, Tanigoshi and Gerdeman set up experimental trials to test different nematode species, application techniques and formulations. In the past three Octobers, the team visited multiple sites to make nematode applications. Since nematodes require a very moist environment, the Pacific Northwest's typical cloudy, damp weather makes October the best time to apply control techniques. Simple backpack sprayers were used to make the applications.

Usually, making good pest-management recommendations takes at least three years of consistent experimentation. The last three years of experimenting with nematodes have shown mixed results—likely due to weather conditions. Nematodes are very sensitive to sunlight and dry conditions, especially when squirted on the sides of trees! The best results, using *Steinernema carpocapsae* and *S. feltiae* nematodes to manage CBT larvae, occurred during periods of wet, cloudy weather and when using a wetting agent to help nematodes wriggle into CBT tunnels under the tree bark. Under optimal conditions, one can expect a 40 to 50 percent reduction in CBT populations. Using insect-feeding nematodes to manage CBT looks promising, especially when integrated with other management practices, such as promoting tree health and recruiting CBT parasitic wasps. The team also plans to experiment with other products, including entomopathic fungi and naturalytes. Stay tuned for more upcoming research. ♪

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**TODD MURRAY** is the Extension Educator for the Washington State University Extension—King County. He may be reached at [todd.murray@metrokc.gov](mailto:todd.murray@metrokc.gov).



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